The eighth meeting of the World Health Organization’s South-East Asia Regional Immunization Technical Advisory Group (SEAR-ITAG) was held from 13 to 16 June 2017 in New Delhi, India.

SEAR-ITAG is a technical group comprising of experts from disciplines such as programme management, communicable diseases/vaccine preventable diseases control, virology, epidemiology and immunization. SEAR-ITAG provides guidance on setting of regional priorities for immunization and technical support for strengthening routine immunization services to member states. It meets annually with the participation of national EPI managers and surveillance focal points and partners to review progress on increasing immunization coverage, surveillance performance, programme issues, and matters related to vaccine quality assurance, and provides guidance on ways to improve and sustain overall high quality performance in member states.

This publication provides an overview of conclusions and recommendations of expert group, SEAR-ITAG, annual meeting during 2017.

South-East Asia Regional Immunization Technical Advisory Group (SEAR-ITAG) Meeting Report

New Delhi, India, 13–16 June 2017
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<th>Description</th>
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<tbody>
<tr>
<td>AD</td>
<td>auto-disable</td>
</tr>
<tr>
<td>AEFI</td>
<td>adverse event following immunization</td>
</tr>
<tr>
<td>AES</td>
<td>acute encephalitis syndrome</td>
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<tr>
<td>AFP</td>
<td>acute flaccid paralysis</td>
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<tr>
<td>bOPV</td>
<td>bivalent oral poliovirus vaccine</td>
</tr>
<tr>
<td>CAH</td>
<td>Child and Adolescent Health Programme</td>
</tr>
<tr>
<td>CCS</td>
<td>containment certification scheme</td>
</tr>
<tr>
<td>CDS</td>
<td>Communicable Diseases Department</td>
</tr>
<tr>
<td>cMYP</td>
<td>comprehensive multiyear plan</td>
</tr>
<tr>
<td>CRS</td>
<td>congenital rubella syndrome</td>
</tr>
<tr>
<td>DTP3</td>
<td>third dose of diphtheria-tetanus-pertussis vaccine</td>
</tr>
<tr>
<td>DHIS</td>
<td>district health information software</td>
</tr>
<tr>
<td>EAPRO</td>
<td>East Asia and Pacific Regional Office</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Programme on Immunization</td>
</tr>
<tr>
<td>ES</td>
<td>environmental surveillance</td>
</tr>
<tr>
<td>GAPIII</td>
<td>WHO Global Action Plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use</td>
</tr>
<tr>
<td>Gavi</td>
<td>Gavi, the Vaccine Alliance</td>
</tr>
<tr>
<td>GDP</td>
<td>Good Distribution Practices</td>
</tr>
<tr>
<td>GHSSVH</td>
<td>Global Health Sector Strategy on Viral Hepatitis</td>
</tr>
<tr>
<td>GVAP</td>
<td>Global Vaccine Action Plan</td>
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<tr>
<td>HBV</td>
<td>chronic hepatitis B virus</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>HbsAg</td>
<td>hepatitis B surface antigen</td>
</tr>
<tr>
<td>HepB</td>
<td>hepatitis B vaccine</td>
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<tr>
<td>HepB3</td>
<td>third dose of hepatitis B vaccine</td>
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<tr>
<td>HepB-BD</td>
<td>hepatitis B vaccine birth dose</td>
</tr>
<tr>
<td>HPV</td>
<td>human papilloma virus</td>
</tr>
<tr>
<td>HSS</td>
<td>health system strengthening</td>
</tr>
<tr>
<td>ID</td>
<td>intra dermal</td>
</tr>
<tr>
<td>IEAG</td>
<td>India Expert Advisory Group</td>
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<tr>
<td>IPV</td>
<td>inactivated poliovirus vaccine</td>
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<tr>
<td>ITAG</td>
<td>Immunization Technical Advisory Group</td>
</tr>
<tr>
<td>IVD</td>
<td>Immunization and Vaccine Development Unit</td>
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<tr>
<td>JE</td>
<td>Japanese encephalitis</td>
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<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<tr>
<td>JRF</td>
<td>Joint Reporting Form</td>
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<tr>
<td>LBs</td>
<td>live births</td>
</tr>
<tr>
<td>MeaNS</td>
<td>measles nucleotide surveillance</td>
</tr>
<tr>
<td>MCV</td>
<td>measles containing vaccine</td>
</tr>
<tr>
<td>MCV1</td>
<td>first dose of measles containing vaccine</td>
</tr>
<tr>
<td>MCV2</td>
<td>second dose of measles containing vaccine</td>
</tr>
<tr>
<td>MNCH</td>
<td>Maternal Neonatal Child Health Unit</td>
</tr>
<tr>
<td>MNTE</td>
<td>maternal and neonatal tetanus elimination</td>
</tr>
<tr>
<td>MR</td>
<td>measles rubella vaccine</td>
</tr>
<tr>
<td>MOV</td>
<td>missed opportunities for vaccination</td>
</tr>
<tr>
<td>NAC</td>
<td>national authority for containment</td>
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<tr>
<td>NCCPE</td>
<td>national certification committee for polio eradication</td>
</tr>
<tr>
<td>NCTF</td>
<td>national containment task force</td>
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<tr>
<td>NIP</td>
<td>national immunization programme</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>NITAG</td>
<td>national immunization technical advisory group</td>
</tr>
<tr>
<td>NRA</td>
<td>national regulatory authority</td>
</tr>
<tr>
<td>NT</td>
<td>neonatal tetanus</td>
</tr>
<tr>
<td>NVC</td>
<td>national verification committee for the elimination of measles and rubella/CRS control</td>
</tr>
<tr>
<td>OPV</td>
<td>oral poliovirus vaccine</td>
</tr>
<tr>
<td>OPV3</td>
<td>third dose of oral poliovirus vaccine</td>
</tr>
<tr>
<td>PCV</td>
<td>pneumococcal conjugate vaccine</td>
</tr>
<tr>
<td>PCV3</td>
<td>third dose of pneumococcal conjugate vaccine</td>
</tr>
<tr>
<td>PCV-10</td>
<td>conjugate vaccine containing 10 pneumococcal serotypes</td>
</tr>
<tr>
<td>PEF</td>
<td>poliovirus essential facilities</td>
</tr>
<tr>
<td>Penta</td>
<td>pentavalent vaccine</td>
</tr>
<tr>
<td>Penta3</td>
<td>third dose of pentavalent vaccine</td>
</tr>
<tr>
<td>PIRI</td>
<td>periodic intensification of routine immunization</td>
</tr>
<tr>
<td>PQ</td>
<td>prequalified</td>
</tr>
<tr>
<td>QA</td>
<td>quality assurance</td>
</tr>
<tr>
<td>ROSA</td>
<td>Regional Office for South Asia</td>
</tr>
<tr>
<td>RCCPE</td>
<td>Regional Commission for the Certification of Poliomyelitis Eradication</td>
</tr>
<tr>
<td>RCV</td>
<td>rubella containing vaccine</td>
</tr>
<tr>
<td>RI</td>
<td>routine immunization</td>
</tr>
<tr>
<td>RPLN</td>
<td>Regional Poliovirus Laboratory Network</td>
</tr>
<tr>
<td>RubeNS</td>
<td>rubella nucleotide surveillance</td>
</tr>
<tr>
<td>RV</td>
<td>rotavirus vaccine</td>
</tr>
<tr>
<td>RVC</td>
<td>Regional Verification Committee</td>
</tr>
<tr>
<td>SAGE</td>
<td>Strategic Advisory Group of Experts on Immunization</td>
</tr>
<tr>
<td>SEA</td>
<td>South-East Asia</td>
</tr>
<tr>
<td>SEARO</td>
<td>WHO’s Regional Office for South-East Asia</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>SEA-RVC</td>
<td>South-East Asia Regional Verification Commission for Measles Elimination and Rubella/ CRS Control</td>
</tr>
<tr>
<td>SEAR-ITAG</td>
<td>South-East Asia Regional Immunization Technical Advisory Group</td>
</tr>
<tr>
<td>SEAR-VAP</td>
<td>South-East Asia Regional Vaccine Action Plan</td>
</tr>
<tr>
<td>SIA</td>
<td>supplementary immunization activity</td>
</tr>
<tr>
<td>SOPs</td>
<td>standard operating procedures</td>
</tr>
<tr>
<td>TT2+</td>
<td>more than two doses of tetanus toxoid containing vaccine</td>
</tr>
<tr>
<td>TTCV</td>
<td>tetanus toxoid containing vaccine</td>
</tr>
<tr>
<td>tOPV</td>
<td>trivalent oral poliovirus vaccine</td>
</tr>
<tr>
<td>US CDC</td>
<td>United States Centers for Disease Control and Prevention</td>
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Introduction

The Eighth Meeting of the World Health Organization’s (WHO’s) South-East Asia Regional Immunization Technical Advisory Group (SEAR-ITAG) was held from 13 to 16 June 2017 in New Delhi, India.

The SEAR-ITAG (referred to hereafter as the ITAG) is a Regional technical expert group, established by WHO’s Regional Director for South-East Asia for providing advice on all aspects of immunization, vaccines and vaccine preventable disease (VPD) prevention, control, elimination and eradication. It comprises experts from such disciplines as programme management, communicable disease/VPD control, virology, epidemiology and immunization. It meets annually with the participation of national Expanded Programme on Immunization (EPI) managers, national surveillance focal points, representatives of national immunization technical advisory groups (NITAGs) and partners.

The terms of reference of the ITAG are to:

(1) review Regional and Member State policies, strategies and plans for the control, elimination and/or eradication of vaccine-preventable diseases, especially for polio eradication, measles elimination, rubella/congenital rubella syndrome (CRS) control, and accelerating Japanese encephalitis (JE) and hepatitis B control;

(2) provide guidance on setting of Regional priorities for immunization and vaccines;

(3) make recommendations on the framework for development of national immunization policies as well as operational aspects of these policies’ implementation; and provide a framework for and approaches to periodic evaluation and strengthening of routine immunization services and systems;
advise Member States on appropriate choices of new vaccines and recommend optimal strategies and technical guidance for the introduction of these vaccines, and for the monitoring and impact evaluation of new vaccines once they are introduced into national immunization programmes (NIPs);

promote and provide technical guidance for the implementation of high-quality vaccine-preventable disease surveillance, including high quality laboratory networks for assisting VPD surveillance;

advise Member States on regulatory requirements to ensure quality and safety of vaccines used in NIPs;

provide guidance on public private partnerships in immunization and vaccines; and

identify and advise on appropriate implementation of research topics in immunization and vaccines, and review the conduct and results of such research projects.

The meeting began with an opening address by Dr Poonam Khetrapal Singh, Regional Director for WHO’s South-East Asia (see Annex 1 for address of the Regional Director). The meeting was chaired by Professor Gagandeep Kang. The other members of ITAG include Professor Sanath Lamabadusuriya, Dr Robb Linkins, Dr Charung Muangchana, Dr Yasho Vardhan Pradhan, Dr Antonia Retno Tyas Utami and Professor Saw Win.

The other meeting participants included:

(1) representatives from NITAGs from 11 countries of the South-East Asia (SEA) Region of WHO,

(2) representatives/technical experts from WHO headquarters and the WHO Regional Office for SEA,

(3) members of the Strategic Advisory Group of Experts (SAGE) representing the SEA Region,

(4) chairpersons of the SEA Regional Certification Commission for Polio Eradication (SEA-RCCPE) and the SEA Regional Verification Commission for Measles Elimination and Rubella/CRS Control (SEA-RVC),

(5) national EPI programme managers and surveillance focal points from ministries of health of the 11 countries of WHO’s SEA Region,
(6) representatives/technical experts from the United Nations Children’s Fund (UNICEF) headquarters and from UNICEF’s Regional Office for South Asia (ROSA) and East Asia and Pacific Regional Office (EAPRO),

(7) representatives from the United States Centers for Disease Control and Prevention (US CDC),

(8) immunization and VPD surveillance focal points from 11 WHO country offices in WHO’s SEA Region,

(9) immunization focal points from UNICEF country offices,

(10) representatives of regional and global partners, donors and stakeholders in immunization and vaccines, including The Bill and Melinda Gates Foundation, Gavi, the Vaccine Alliance (Gavi), Japan International Cooperation Agency (JICA), PATH, Rotary International, and the United States Agency for International Development (USAID).

(see Annex 2 for agenda of the meeting and Annex 3 for the full list of participants)
Objectives

The objectives of this meeting were:

1. to review progress in performance of national immunization programmes in relation to the strategic goals outlined in the South-East Asia Regional Vaccine Action Plan (SEAR-VAP);
2. to review progress in implementation of recommendations of the Seventh SEAR-ITAG meeting held in June 2016;
3. to identify priority actions for 2017 to 2018 to achieve the milestones/goals outlined in the SEAR-VAP;
4. to seek the guidance of SEAR-ITAG in effectively addressing the following priority areas:
   - measles elimination and rubella/CRS control;
   - strengthening routine immunization (RI) systems and services, including accelerating JE and hepatitis B control;
   - polio eradication and endgame strategy;
   - introduction of new vaccines and availability of safe and effective vaccines;
   - immunization coverage evaluation surveys.
Conclusions and recommendations

South-East Asia Regional Vaccine Action Plan

The SEAR-VAP has adapted the goals, strategies and activities recommended in the Global Vaccine Action Plan (GVAP) to the context of SEA Region. The SEAR-VAP has eight goals and a set of strategic objectives and recommends key activities that are considered essential to achieve GVAP and SEAR-VAP goals within the decade.

| GOAL 1 | RI systems and services are strengthened |
| GOAL 2 | Measles is eliminated and rubella/CRS controlled |
| GOAL 3 | Polio-free status is maintained |
| GOAL 4 | Elimination of maternal and neonatal tetanus is sustained |
| GOAL 5 | Control of JE is accelerated |
| GOAL 6 | Control of hepatitis B is accelerated |
| GOAL 7 | Introduction of new vaccines and related technologies is accelerated |
| GOAL 8 | Access to high quality vaccines is ensured |

The ITAG endorsed the updated version of the SEAR-VAP with its monitoring framework and recognized the initiatives of national EPIs in implementing recommended activities to meet the goals outlined in the SEAR-VAP.

The ITAG observed that NITAGs of all countries have recently completed and submitted annual reports, but the quality of these reports varies.
ITAG recommendations

(1) All countries should develop a national annual activity plan aligned with the SEAR-VAP for the fiscal year 2017-2018. These plans should be finalized and submitted to the NITAGs and the WHO Regional Office for SEA by September 2017.

(2) National Immunization Programmes (NIPs) in countries should report implementation of goals outlined under the SEAR-VAP to their NITAGs. The NITAGs should monitor the implementation of activities targeted to achieve SEAR-VAP goals at least twice every year, and advise on strategies to achieve the SEAR-VAP goals. The NITAGs should include this information in the annual report to the SEAR-ITAG.

Following a detailed review of the performance, the ITAG made its conclusions and provided recommendations for each of the eight goals of the SEAR-VAP. The conclusions and recommendations of the ITAG for each goal are summarized below.

3.1 RI system and services are strengthened (Goal 1)

The 11 countries of WHO’s SEA Region are home to more than 1.9 billion people, with a combined annual birth cohort of more than 36 million infants. Immunization is widely recognized as one of the most cost-effective public health interventions, and all countries in the Region give high importance to their NIPs.

Strengthening the RI systems and services is the overarching goal of the SEAR-VAP 2016-2020. The strategic objectives to achieve this goal include:

(1) All countries commit to immunization as a priority.
(2) Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility.
(3) Benefits of immunization are equitably extended to all people.
(4) Immunization programmes are integrated into a well-functioning health system.
(5) Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies.
(6) Country, regional and global research and development innovations maximize the benefits of immunization.
The key targets to achieve are:

(1) By 2015 all countries have ≥90% national coverage and ≥80% coverage in every district or equivalent with the third dose of DTP-containing vaccine (DTP3).

(2) By 2020 all countries have ≥90% national coverage and ≥80% coverage in every district or equivalent for all vaccines in national programmes, unless otherwise recommended.

As per the WHO/UNICEF estimates, Bangladesh, Bhutan, the Democratic People’s Republic of Korea, Maldives, Myanmar, Sri Lanka and Thailand have achieved >90% national coverage for DTP3 in 2016. These countries have achieved >90% coverage for all vaccines given during infancy. As per the WHO/UNICEF joint reporting form (JRF), Bangladesh, Democratic People’s Republic of Korea, Maldives, Sri Lanka and Timor-Leste have achieved more than 80% DTP3 coverage in all districts. From 2000 to 2016, DTP3 coverage in the SEA Region increased from 64% to 88%. However, 4.2 million children in the SEA Region do not receive DTP3; three million of these children are in India, and one million in Indonesia.

All countries in the Region have committed to immunization through legislation or a legal framework that upholds immunization as a priority. All countries have developed a comprehensive national multiyear immunization plan and, in line with it, have developed micro plans to improve immunization coverage in all districts or equivalent administrative levels. All countries in the SEA Region have established NITAGs that are providing technical support and monitoring oversight to the immunization programme. Countries have developed innovative approaches such as the Intensified Mission Indradhanush in India, Fully Immunized District Initiative in Nepal, community registration and additional outreach clinics in Timor-Leste, urban immunization in Bangladesh and high risk district approach in Indonesia. These approaches have not only strengthened RI services but have also increased the access of the general population to the health system.

3.1.1 ITAG conclusions

The ITAG appreciated the initiatives made in the Region, notably by India, Indonesia, Myanmar and Nepal, to increase immunization coverage in recent years. However, it also noted that the diphtheria, pertussis, tetanus and measles cases reported in these countries indicate immunity gaps for diseases prevented by pentavalent (Penta) and measles containing vaccines (MCVs).
The ITAG noted that achieving and sustaining greater equity in immunization coverage requires that eligible individuals be immunized with all appropriate vaccines, regardless of geographic location, age, gender, socioeconomic level, ethnic group or migrant status.

The ITAG observed that urban populations in the Region are expanding rapidly, with many children living in poor environments and not having access to immunization. It observed that immunization coverage is generally low in urban poor areas and particularly so in some of the mega cities.

The ITAG congratulated countries for conducting national and subnational EPI coverage evaluation surveys to identify areas with suboptimal coverage. It also recognized the importance of joint national and international EPI reviews in identification of the strengths and challenges in national EPIs.

The ITAG observed the rapid turnover of mid-level managers and health workers in districts with low coverage and recognized the importance of training to ensure the effective management of immunization programmes and ensure safe vaccination.

The ITAG recognized the importance of improving the accuracy and reliability of data on immunization coverage and VPD surveillance and noted that high quality data are important to guide national immunization plans. It also emphasized the need to ensure the use of high quality data to monitor EPIs.

The ITAG appreciated the efforts of NIPs and NITAGs to evaluate the extent to which populations at national and subnational levels have confidence in vaccines. However, the ITAG noted that vaccine hesitancy exists in some areas of the Region.

The ITAG recognized the need to advocate at all levels and with all stakeholders for a comprehensive health financing policy in the context of the universal health care (UHC) vision as a pre-requisite for increasing health budget allocations. NIPs could work with partners (for example, WHO, UNICEF, the World Bank, US CDC and Gavi) to showcase immunization as a ‘best-buy’ in public health.

The ITAG noted that Gavi funds are gradually phasing out from countries as the economic status of countries improves. In this context, the ITAG expressed concerns regarding the ability of some countries to maintain high immunization coverage as well as the potential for increased incidence of VPDs as Gavi support to these countries diminishes.
3.1.2 ITAG recommendations

**ITAG recommendations for all countries**

1. In urban and urbanizing areas with sub-optimal immunization coverage, plans should be developed by NIPs (with the support of development partners) to improve vaccination coverage. There should be a special focus on monitoring progress in urban poor communities, including among migrants.

2. NIPs should pursue implementation of the recommendations of the EPI and VPD surveillance reviews and coverage evaluation surveys that have been conducted most recently. WHO and UNICEF country offices as well as Gavi should assist NIPs to follow up on and implement these recommendations.

3. Countries should recognize the potential for vaccine hesitancy and understand the importance of data on the confidence that populations have in vaccination. If adequate information is not available, countries should conduct assessments with support from WHO and UNICEF. Communication strategies to address vaccine hesitancy should be developed.

4. NIPs and in-country development partners should conduct data quality assessments at national and subnational levels and develop data quality improvement plans.

5. Countries should consider information technology platforms (such as the district health information software (DHIS)) so that the collection and reporting of data related to vaccination can be integrated with data from other public health programmes.

**ITAG recommendations for specific countries**

1. **Indonesia** should further strengthen the on-going ‘periodic intensification of routine immunization (PIRI)’ programme in high-risk districts. In-country development partners should support implementation and monitoring of interventions to reach required immunization coverage targets.

2. **Myanmar** should accelerate efforts to improve immunization coverage with special focus on townships with low coverage.
(3) In the context of declining RI coverage in Nepal in 2016, an urgent analysis of the low performing districts should be undertaken and interventions implemented to improve coverage. Nepal should also conduct a comprehensive evaluation of the ‘fully-immunized districts’ initiative and share lessons learnt in community demand generation.

(4) Countries should use Gavi immunization financing dialogue and transition planning as an opportunity to comprehensively analyse the financial situation of EPI programmes.

(5) Countries transitioning from Gavi funding for vaccines to self-sufficiency should define long-term action plans, identify financing strategy options and explore innovative resource mobilization to maintain the supply of vaccine, access to new and under-utilized vaccines and sustain achievements.

3.2 Measles is eliminated and rubella/CRS controlled (Goal 2)

The WHO Regional Committee for the SEA Region, during its Sixty-sixth session in September 2013, adopted a resolution to eliminate measles and prevent rubella/CRS in the Region by 2020.

Reaching the measles elimination and rubella/CRS prevention goal by 2020 will require all countries to:

(1) achieve and maintain at least 95% coverage with two doses of measles and rubella containing vaccine through routine and/or supplementary immunization;

(2) have well performing case-based measles and rubella/CRS surveillance systems supported by a WHO proficient laboratory measles and rubella laboratory network; and

(3) strengthen adequate support and linkages with other health initiatives and efforts at health systems strengthening to achieve the strategic objectives.

Two countries -- Bhutan and Maldives -- have been verified as having eliminated endemic measles from the country. The remaining countries in the Region are still endemic for measles, rubella and CRS. Measles deaths in the SEA Region have been estimated to have been reduced by 66% from 2000 to 2015, and nearly 620 000
measles deaths estimated to have been averted in 2016 alone. All countries in the
Region have introduced two doses of MCV and nine countries have already introduced
rubella containing vaccine (RCV) in their RI schedules.

Reported Regional coverage of the first dose of MCV (MCV1) has stagnated at
around 87% for the last five years although five countries have reported coverage
of >95% at national level. Reported Regional coverage of the second dose of MCV
(MCV2) has increased from 71% in 2015 to 76% in 2016. The coverage of RCV
delivered through RI was reported to be 12% for the Region in 2015. All countries
in the Region are conducting case based surveillance for measles and rubella with
India and Indonesia still expanding their measles and rubella case-based surveillance
systems. The surveillance performance indicators are gradually improving with the
non-measles non-rubella discard rate, a proxy for the sensitivity of surveillance, still
at 0.48 Regionally, much below the target of 2 per 100 000 population, indicating
that the sensitivity of the surveillance system remains relatively poor. CRS surveillance
is conducted in all countries – in eight as sentinel site surveillance and in three as
part of integrated disease surveillance.

3.2.1 ITAG Conclusions

The ITAG acknowledged measles elimination and rubella/CRS control as a flagship
programme for the Region, as well as acknowledging the strong commitment shown
by both the leadership of the countries and by WHO’s Regional Office for SEA to
this programme.

The ITAG congratulated Bhutan and Maldives on interrupting the transmission of
endemic measles and commended the other countries on significant progress made
towards measles elimination and rubella/CRS control.

The ITAG emphasized the importance of achieving high coverage of measles and
rubella containing vaccines through RI in all countries of the Region as a fundamental
strategy to achieve the measles elimination and rubella/CRS control goal. It noted
that only five countries of the Region had achieved the desired coverage of >95%
with MCV1 and that only four countries of the Region had achieved >95% coverage
with MCV2.

The ITAG noted the plans for conducting large-scale, wide age range
supplementary immunization campaigns in India and Indonesia targeting nearly 470
million children during the next 18 months with a measles and rubella containing
vaccine. It emphasized the need to achieve high coverage during these campaigns due to the huge implications of these campaigns for the national, regional and global programme.

The ITAG highlighted that outbreaks of measles and rubella should be used to identify programme weaknesses and that, in addition to stopping transmission, outbreak response should be seen as an opportunity to introduce improvements to RI and surveillance.

The ITAG appreciated the current review mechanisms established by the SEA-RVC and endorsed the recommendations made by the SEA-RVC.

The ITAG noted the paucity of funding resources for activities required to achieve measles elimination and rubella/CRS control by 2020.

The ITAG noted the programmatic risks to the measles elimination goal associated with a ramp-down of polio funding from 2017 to 2019. These programmatic risks are due to the support provided by the polio networks to measles surveillance and immunization activities in five countries of the Region, namely Bangladesh, India, Indonesia, Myanmar and Nepal. The ITAG was also concerned at the risks associated with some countries in the Region transitioning from Gavi support to financial self-sufficiency for vaccines over the next few years. The ITAG recognized the need for predictable funding for measles elimination and rubella/CRS control in countries of the Region to achieve the goal of measles elimination and rubella/CRS control by 2020.

The ITAG noted that a mid-term review of the SEA Regional strategy for measles elimination and rubella/CRS control 2014-2020 is planned to be undertaken in the Region during 2017.

3.2.2 ITAG recommendations

ITAG recommendations for all countries

_Closing immunity gaps_

(1) MCV1 coverage, MCV2 coverage and drop-out between MCV1 and MCV2 should be monitored at regional, national and subnational levels as key performance indicators for progress towards measles
elimination, as well as indicators for immunization system performance. MCV2 coverage at the first subnational level should be included in the Annual EPI Reporting Form.

(2) Actions to reach the desired coverage levels with both MCV1 and MCV2 should be identified and implemented. Countries should specifically work to build a strong second year of life platform to ensure equitable, timely delivery of MCV2; other needed EPI vaccines and other public health interventions.

(3) Countries should identify missed opportunities for vaccination (MoV) with MCV2 and develop strategies to take advantage of all healthcare contacts to catch children up on missed vaccines. The ITAG additionally recommends removing policy barriers to providing missing MCV doses.

(4) Need-based supplementary immunization activities (SIAs) with measles and rubella containing vaccines should be conducted to enhance population immunity and close the immunity gaps in countries/areas/populations where routine coverage is below the desired requirements to achieve measles elimination.

(5) The opportunity of conducting SIAs should be used to strengthen RI by identification of children missed through RI and formulating a plan to vaccinate these children. In addition, hard-to-reach areas found during SIAs should be incorporated into RI micro plans.

(6) Outbreak response should be used to introduce improvements to RI and surveillance.

**Improving surveillance for measles, rubella and CRS**

(1) Subnational work-plans for measles elimination and rubella control/elimination based on the findings of subnational risk assessments should be developed and shared with the NITAGs, national verification committees (NVCs) and the RVC (for India the corresponding body would be the India Expert Advisory Group (IEAG) for Measles and Rubella).

(2) National measles and rubella surveillance guidelines should be revised by the end of 2017 in line with the updated Regional surveillance guidelines and indicators.
(3) Efforts to enhance the sensitivity of measles and rubella surveillance should be initiated through an effective implementation of the revised surveillance guidelines.

(4) Special efforts should be undertaken to expand the reporting network to beyond acute flaccid paralysis (AFP) surveillance reporting sites.

(5) Engagement of the private sector to enhance reporting of cases from private sector should be ensured.

(6) Concerted efforts should be made to enhance the data quality of measles and rubella surveillance and a monthly reconciliation of laboratory and epidemiological data and monitoring of MR surveillance data should be done.

Strengthening laboratory capacity for measles and rubella diagnostics

(1) An assessment of laboratory capacity and readiness to support the implementation of revised case-based surveillance for measles and rubella should be undertaken and plans developed to ensure surveillance is well supported by the laboratory.

(2) Countries should review the costs and financing of their national and subnational measles and rubella laboratories, and map the current or future funding gaps based on case-based surveillance recommendations. All laboratories in the Regional Measles and Rubella Network should institute a quality assurance (QA) program that includes routine internal auditing, and ensures an adequate supply of kits and reagents.

(3) Countries should consider fast-track custom-clearance facility for imported shipment related to QA samples, test kits and laboratory supplies to support measles and rubella surveillance.

(4) Countries should collect adequate specimens for virology to characterize measles and rubella genotypes. Findings should be linked with epidemiological case-based data to identify chains of transmission. Findings should be regularly shared with all stakeholders and should ensure timely submission of genotypic information in measles nucleotide surveillance (MeaNS) and rubella nucleotide surveillance (RubeNS).
Others

(1) The findings of the mid-term review of the SEA Regional strategy for measles elimination and rubella/CRS control 2014-2020 are to be shared with the ITAG during its next meeting.

(2) A target date for Regional rubella elimination should be considered after all countries in the Region have introduced RCV.

(3) Countries should use all funding opportunities presented by domestic sources, the polio transition and Gavi support. Joint appraisals should be viewed as opportunities to obtain funds to strengthen RI and fever/rash surveillance.

ITAG recommendations for specific countries

(1) **India and Indonesia** should ensure that the planned national wide-age range SIAs with measles rubella vaccine (MR) are conducted with high quality ensuring that:

- pre-campaign readiness assessments are conducted with a go/no-go policy and such readiness is robustly monitored by partners;
- intra-campaign monitoring is adequately conducted and corrective actions such as mop-ups are undertaken, if required, based on monitoring feedback;
- post-campaign coverage evaluations are conducted; and
- technical assistance is adequately available at subnational level through partners.

(2) **India and Indonesia** should also ensure that the opportunity of SIAs is utilized for RI strengthening, by identification of hard-to-reach/neglected/underserved populations during the SIAs and by incorporating these into RI micro plans immediately after the SIAs.

(3) **The Democratic People’s Republic of Korea** should introduce RCV in the routine immunization schedule as soon as possible, and no later than 2018.

(4) **Sri Lanka and Thailand** should review current epidemiological data on measles and rubella, and if required, optimize the schedule of MCV2
Bangladesh, Myanmar and Timor-Leste should conduct nationwide MR SIAs within the next one to two years to close the immunity gap, as per the epidemiological findings.

India and Indonesia should consider establishing subnational laboratories to meet the anticipated demand for specimen testing. In addition, they should have one (or more) national laboratory to serve as a reference laboratory and ensure QA services in compliance with WHO criteria.

3.3 Polio-free status is maintained (Goal 3)

**AFP and environmental surveillance (ES)**

Over the three years since certification the Region has stayed polio-free. The overall non-polio AFP rate in 2016 was 8.36 per 100,000 population <15 years of age, which exceeds the globally recommended operational target of 2 per 100,000. The non-polio rate was >2 in 2016 in seven countries (Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, Thailand) while it was between 1 and 2 in the remaining four countries. In 2016, adequate stool samples were collected from 87% of the reported AFP cases in the Region, as against the globally recommended target of at least 80%. ES in the Region was expanded to include additional sites in Indonesia and India during 2016 and was initiated in Thailand in the same year. A total of 45 sites in four SEA Region countries (Bangladesh, India, Indonesia, and Thailand) are currently conducting ES and efforts to initiate ES in Myanmar and Nepal during 2017 are in progress. ES data have provided important evidence for the disappearance of Sabin-like poliovirus type 2, following the switch from trivalent oral poliovirus (tOPV) to bivalent oral poliovirus (bOPV) during 2016, and have also helped with the investigation of and response to vaccine derived polio viruses (VDPVs) detected in sewage samples. The performance of the Regional Polio Laboratory Network (RPLN) remains generally high and accreditation visits reaffirm that the laboratories in the Network have updated standard operating procedures (SOPs) for safe handling of AFP specimens, viral isolates and are meeting the global benchmarks for polio virus diagnostics.

**Population immunity through RI and SIAs**

Six countries (Bangladesh, Bhutan, the Democratic People’s Republic of Korea, Maldives, Sri Lanka, and Thailand) have reported the third dose of oral polio vaccine (OPV3) coverage >90% while India, Indonesia, Myanmar, Nepal and Timor Leste
have coverage between 80% and 90% in 2016, based on the WHO and UNICEF July 2017 revision of estimates of national immunization coverage for 2016. Mass polio-vaccination activities with oral polio vaccine (OPV) were conducted in Bangladesh, India, Indonesia, Myanmar and Nepal in 2016 to close immunity gaps against polio.

**Switch from tOPV to bOPV**

During a two-week period in April 2016, all 11 countries in the WHO SEA Region switched from using tOPV to using bOPV. ES data were closely monitored for detection of Sabin like polio virus 2, specifically after the switch, and they provided crucial epidemiological information to guide the programme. Six VDPV type 2 (VDPV2) were detected in sewage samples during 2016 in the Region, as a part of routine ES. All six VDPVs were reported from India, two reported prior to the switch and four after; one each during the months of April and May, and two in June. All VDPVs detected in ES were adequately investigated for evidence of circulation in the Region. In 2016, a mass vaccination campaign was conducted in India with fractional inactivated poliovirus vaccine (IPV) subsequent to detection of the VDPV2. Sabin like type 2 polioviruses were reported in ES samples collected from two sites in India between August and December 2016 following which massive search operations for tOPV were conducted. Leftover tOPV vials were detected, removed and destroyed.

**IPV introduction, challenges and actions to mitigate the risks**

All countries in the Region introduced IPV between 2014 and 2016. As part of risk mitigation strategies associated with the global IPV shortage, the available IPV supplies are being prioritized to countries of the Region that are at a higher risk of poliovirus resurgence, namely India, Indonesia, Myanmar and Timor-Leste. Two countries in the Region, India and Sri Lanka, have replaced the full dose IPV schedule with two fractional (one-fifth) doses in their RI schedules, in order to stretch the available IPV supplies. Another two countries, Bangladesh and Nepal, are likely to shift from a full dose IPV schedule to the fractional IPV dose schedule, before end-2017.

**Poliovirus laboratory containment**

Activities to contain type 2 polioviruses in facilities are progressing in the Region. Poliovirus essential facilities (PEF) have been identified to store/handle type 2 polioviruses in two countries of the Region, namely India and Indonesia. National authorities for containment (NACs) have been established in both countries and processes to undertake certification of these facilities as per the global containment certification scheme (CCS) have commenced. All countries are implementing new
surveys of biomedical laboratories to meet requirements outlined in the WHO Global Action Plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses and sequential cessation of oral polio vaccine use (GAPIII). Special trainings on GAPIII requirements for national containment taskforces (NCTF), PEFs, NAC and vaccine manufacturers were successively conducted by WHO in January, February and October 2016, followed by training for CCS auditors in January 2017 and a Regional review and planning meeting in April 2017. The RPLN has conducted several bio-risk management capacity building activities. Countries are being supported with direct technical assistance to prepare their activity plans for containment of Sabin2/OPV2 materials.

**Certification of maintaining polio free status**

The Regional Certification Commission for Polio Eradication (RCCPE) and national certification committees for polio eradication (NCCPEs) in all 11 countries are functional and providing oversight and guidance for polio eradication activities. The Ninth meeting of the SEA-RCCPE was successfully conducted from 07 to 09 December 2016 in Colombo, Sri Lanka. The RCCPE reviewed progress in each country in the Region and concluded that the Region has remained polio-free.

**Transition planning**

The transition planning process has been initiated in five countries of the Region that have substantial polio assets. These countries include Bangladesh, India, Indonesia, Myanmar and Nepal. A country-by-country approach is being adopted due to a difference in the scope and type of support being provided by polio networks in different countries, as well as variability in the capacities of different countries to absorb and support functions that are currently supported by polio networks. The transition planning process has progressed well in India and an incremental increase in funding support for the polio network from the domestic budget of the government is being worked out. Transition plans are also being developed in Bangladesh, Indonesia, Myanmar and Nepal, with alternative funding options being explored in these countries.

**3.3.1 ITAG conclusions**

The ITAG congratulated the EPI, surveillance and laboratory personnel of the Region for maintaining polio-free status for more than six years and noted with satisfaction the response undertaken in countries of the Region in response to the VDPVs detected in AFP cases and sewage samples during recent years.
The ITAG expressed concern at the sub-optimal quality of AFP surveillance in some countries, notably Indonesia and Myanmar.

The ITAG congratulated the Region and countries for recent efforts to expand ES to additional countries/sites during the past two years and noted the plan for initiating ES in two additional countries (Myanmar and Nepal) before end of 2017, in addition to the four countries that are already conducting ES (Bangladesh, India, Indonesia and Thailand).

The ITAG expressed concern at the continued global shortage of IPV. It commended India and Sri Lanka for using two fractional IPV doses, instead of the full dose IPV in the RI schedule, to stretch the available IPV supplies. It noted the recommendation of the NITAGs of Bangladesh and Nepal to introduce fractional IPV in the two countries during 2017.

The ITAG noted and commended the efforts undertaken in India to search for tOPV use, following the detection of Sabin like type 2 polioviruses in sewage samples, four months and beyond after the switch from tOPV to bOPV.

The ITAG noted the continued progress and substantial capacity building undertaken in type 2 poliovirus containment as per GAPPII but is concerned that very complex requirements (particularly in terms of management, coordination and oversight) have to be completed within comparatively short time frames.

The ITAG emphasized that poliovirus laboratory containment is essential to maintain polio-free status, especially in view of increasing susceptibility to type 2 poliovirus.

The ITAG noted that the NCCPEs are functional in all 11 countries and that the RCCPE is fully active.

The ITAG was concerned at the risks associated with the winding down of the polio eradication initiative. This concern related not only to the polio activities but also to other programmes in five countries of the Region that are currently supported by polio funded human resources. It commended development of transition plans by countries of the Region to mitigate the risks associated with the polio ramp down.

The ITAG noted that the post-certification strategy will require continued focus on surveillance and containment activities.
3.3.2 ITAG recommendations

ITAG recommendations for all countries

(1) Efforts to achieve/sustain certification level AFP surveillance should be ensured in all countries.

(2) A subnational risk-analysis should be conducted in all countries and efforts to plug surveillance and immunity gaps should be strengthened in areas at risk. Polio SIAs in India should be guided by the IEAG while in other countries these efforts should be guided by the NITAG.

(3) A systematic review of current outbreak response plans should be undertaken and plans and SOPs revised to align with the revised global guidelines (May 2017 version).

(4) WHO and countries need to support technical implementation of GAPIII requirements with adequate advocacy and coordination of all stakeholders concerned, including those who are outside of the EPI and public health structures.

(5) The performance of ES should be monitored in all areas. Indicators should be developed to monitor laboratory performance for ES; data collection and dissemination processes should be harmonized across all laboratories.

ITAG recommendations for specific countries

(1) ES should be operationalized in Myanmar and Nepal in 2017. ES should be further expanded in India and Indonesia based on risk analysis.

(2) Evaluation of the fractional IPV introduction/use in Sri Lanka and India should be undertaken and lessons learned should be documented.

(3) Bangladesh and Nepal should complete all preparations for and introduce fractional IPV in 2017.

(4) In the context of a recent decline in AFP surveillance indicators in Indonesia, an urgent review of AFP surveillance quality at the subnational level should be undertaken for corrective actions.
Detailed polio transition plans should be submitted to the next ITAG by countries with substantial polio-funded assets – Bangladesh, India, Indonesia, Myanmar and Nepal. The polio transition process should be led by the ministries of health and involvement of partners and donors should be enhanced to ensure funding to sustain polio assets and mitigate the programmatic risks associated with polio ramp-down.

3.4 Elimination of maternal and neonatal tetanus is sustained (Goal 4)

In May 2016, MNTE in Indonesia was validated using a phased approached similar to that used in India. This completed the achievement of the goal of Regional MNTE. Due to their histories of many years of strong RI and high quality surveillance systems, it could be assumed that Bhutan, the Democratic People’s Republic of Korea, Maldives, Sri Lanka and Thailand had already achieved MNTE before 2000.

All countries in the Region follow the WHO recommendation on vaccinating pregnant women with tetanus toxoid containing vaccine (TTCV). Over 80% coverage with two or more doses of TTCV in pregnant women (TT2+) has been reported by seven countries for several years, as reported through the WHO/UNICEF Joint Reporting Form – (JRF). Regional TT2+ coverage improved from 64% in 2014 to 78% in 2015 and has been maintained at this level. However, lower coverage does not necessarily indicate weak programme performance. After accumulating repeated vaccine doses during multiple pregnancies and SIAs, women of child bearing age (WCBA) eventually become non-eligible for further vaccination during pregnancy while still contributing to the target denominator for calculation of TT2+ coverage. Field surveys conducted during validation exercises have indicated much higher protection at birth than reported TT2+ coverage suggested.

Infant immunization against tetanus (DTP and Penta) rose from 56% in 2000 to 88% in 2016 according to JRF country official estimates (for Bhutan and Indonesia, administrative coverage figures were used). Several countries give booster doses in early childhood or have integrated TTCV vaccination into their school health programmes. NIPs also provide a combination of tetanus and diphtheria toxoid as booster doses in late childhood and/or for pregnant women.

In 1988, countries in the Region reported almost 15 000 neonatal tetanus (NT) cases. However, this number was estimated to only represent 10% of the true number of cases, as the majority of NT cases were not reported. As a result of immunization
efforts and improved NT surveillance, often integrated with other VPD surveillance, 366 NT cases from five countries have been reported to date in 2016.\(^1\) None of the countries exceeded the “elimination” definition of <1 NT case per 1,000 live births (LB) in each district, considered as the third administrative level of a country.

### 3.4.1 ITAG conclusions

The ITAG noted that, following Regional MNTE in May 2016, no country has reported NT rates >1 per 1,000 LBs annually at district level. However, NT surveillance may not be sensitive enough to detect all NT cases in all places.

The ITAG concurred with WHO’s Strategic Advisory Group of Experts on Immunization’s (SAGE’s) conclusion in October 2016 that achievement and maintenance of MNTE should be seen as a key indicator of universal health coverage since the disease mainly affects the most underserved and marginalized populations.

The ITAG took note of the updated February 2017 WHO position paper on TTCV and the opportunity for NIPs to review and adjust their RI schedules to ensure tetanus (and diphtheria) protection over the life course.

### 3.4.2 ITAG recommendations

**ITAG recommendations for all countries**

Recommendations made on MNTE at the 2016 ITAG meeting remain valid.

### 3.5 Control of JE is accelerated (Goal 5)

The SEAR-VAP 2016-2020 has identified accelerated control of JE as one of the eight goals and laid out the following five strategic objectives to achieve this goal:

1. developing and sustaining acute encephalitis syndrome (AES) surveillance through integrated national surveillance system or sentinel surveillance, with accredited national laboratories in endemic countries;

2. analysing the disease burden for JE and risk factors for transmission of the disease;

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\(^1\) Source: JRF; no data included for Bhutan and Indonesia and India figures provisional
(3) achieving >90% coverage in all existing JE immunization programmes in countries as well as introducing JE vaccination through RI in countries with demonstrated JE risk;

(4) conducting wide age range immunization campaigns based on the disease burden; and

(5) creating partnerships for advocacy and resource mobilization for JE control.

Currently, 10 of 11 countries in the SEA Region are endemic for JE, with the exception being Maldives. Vaccination is the most cost effective strategy to prevent and control JE and WHO recommends that JE vaccination should be integrated into national immunization schedules in all areas where JE is recognized as a public health priority. Three countries, Nepal, Sri Lanka and Thailand have introduced immunization against JE nationwide, while India has introduced in high-risk areas. All countries (excluding Maldives) in the Region are conducting JE and AES surveillance with varying levels of intensity: nationally in six countries (the Democratic People’s Republic of Korea, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste) and in sentinel/high risk areas in four countries (Bangladesh, Bhutan, India and Indonesia). JE/AES surveillance is supported by 13 laboratories in the Region (with 12 of them accredited by WHO as of 2016) for confirmation of suspected cases:

3.5.1 ITAG Conclusions

The ITAG recognized that JE has been controlled in Sri Lanka and Thailand through effective implementation of JE control strategies with a focus on immunization. The ITAG noted that Nepal has also observed a declining trend in reported JE cases.

The ITAG noted the multiple interventions made in JE control in endemic districts in India, including vaccination of children aged <15 years through SIAs and RI, and vaccination of adults up to 60 years of age in some districts.

The ITAG noted Myanmar’s plans to conduct an SIA followed by national introduction of JE vaccine into the RI programme after ascertaining the disease burden though national surveillance.

The ITAG noted the fact that JE continues to be endemic in 10 countries in the Region and that several countries of the Region have not fully ascertained their JE disease burden.
The ITAG observed the occurrence of large numbers of JE cases in India and Nepal in age groups targeted for vaccination as well as among adults. Sri Lanka has reported a few cases in unvaccinated groups. The ITAG observed that it is important to identify reasons for occurrence of JE cases in above mentioned groups.

The ITAG recognized the importance of introducing JE vaccination in nationally defined high risk areas across the Region.

3.5.2 ITAG recommendations

ITAG recommendations for all countries

1. WHO should set-up a subcommittee to conduct a desk review of the JE situation in the Region and propose strategic directions to identify and vaccinate people living in JE endemic areas. Findings of the subcommittee should be submitted to the ITAG at its next meeting.

2. WHO should advise the Region’s countries on the conduct of laboratory supported JE surveillance and on the use of standardized laboratory test kits.

3. NIPs and NITAGs should monitor coverage of routine JE immunization at subnational levels.

ITAG recommendations for specific countries

JE surveillance needs to be strengthened in Bangladesh, Bhutan and Indonesia to measure the disease burden.

3.6 Control of Hepatitis B is accelerated (Goal 6)

In 2015 prevalence of chronic hepatitis B in the SEAR was estimated to range between 3% and 5% in the general population depending on the source of information. Subsequently, WHO estimated that there were approximately 100 million persons with chronic hepatitis B virus (HBV) infection (~5%) resulting in an estimated 300,000 deaths per year across the Region. These deaths result from the sequelae of HBV such as liver cirrhosis and hepatocellular cancer. The prevalence of chronic hepatitis B infection varies by country and target population. In addition, intra-country variability of infection rates has also been observed.

In 2016, the Global Health Sector Strategy on Viral Hepatitis (GHSSVH) set a 2020 goal of reaching a ≤1% prevalence of hepatitis B surface antigen (HBsAg)
among 5 year old children; this goal was endorsed by the SEAR-ITAG. The GHSSVH also calls for 30% reduction in new cases and 10% reduction in mortality by 2020. By end-2016, all 11 countries in the SEA Region had introduced hepatitis B vaccine (HepB) into their RI schedules as part of combination vaccines, and eight countries (Bhutan, the Democratic People’s Republic of Korea, India, Indonesia, Maldives, Myanmar, Thailand, Timor-Leste) had included universal HepB birth dose (HepB-BD) according to WHO’s Monitoring System in 2016.

The overall coverage with the third dose of HepB (HepB3) in the Region increased from 53% in 2010 to 88% in 2016, based on official country estimates contained in the 2016 JRF. Although HepB3 coverage was reported to be >90% in eight countries, HepB3 coverage has not yet reached this level in India (88%) or Indonesia (85%), which account for the largest births cohorts in the Region.

Among the eight countries that included HepB-BD in their vaccination schedules in 2016, coverage was >90% in four (Bhutan, the Democratic People’s Republic of Korea, Maldives, Thailand). India, which contributes 70% of the births annually to the Region, reported HepB-BD coverage of 47% and Indonesia reported coverage of 83%. Figures relate to vaccination within 24 hours of birth in the Democratic People’s Republic of Korea and India and within 7 days of birth in the other countries reporting. No relevant coverage figures were available for Myanmar and Timor Leste due to fact that HepB-BD has been only recently introduced in these countries.

The results of nationally representative serosurveys among children at least 5 years of age to estimate post-vaccination seroprevalence are available in Bangladesh, Nepal and Thailand; with a survey currently ongoing in Bhutan. In India, there are a number of studies, but each is focused on an area or state. In Nepal, subnational studies have shown geographic variability in HBsAg prevalence. DPR Korea, Maldives and Timor Leste have no serosurvey data.

The Immunization and Vaccine Development Unit (IVD) of WHO’s Regional Office in SEA is currently developing country profiles on hepatitis B control with relevant and available data sources from IVD, the Communicable Diseases Department (CDS) (viral hepatitis control) and the Child and Adolescent Health Programme (CAH) as well as a general information/ communication/ advocacy package. The 2016 analysis of the status and progress of hepatitis B control through vaccination in the SEA Region is being updated in consultation with WHO headquarters and US CDC, drawing upon their respective modelling work.
3.6.1 ITAG conclusions

The ITAG noted that overall HepB3 coverage in the Region still falls short of the GVAP and SEAR-VAP target of ≥90%; with India and Indonesia (which account for the largest births cohorts in the Region) reporting 88% and 85% HepB3 respectively. Both countries also report below target HepB-BD coverage.

The ITAG welcomed the HepB-BD introduction in Myanmar and Timor Leste in 2016 but realized the challenges in quickly reaching high coverage levels in these countries due to the large numbers of home deliveries.

The ITAG noted that nationally representative serosurveys among children to estimate post-vaccination seroprevalence are only available in a few countries and that some countries have no serosurvey data.

The ITAG welcomed the Regional Office for SEA’s work to develop country profiles to describe the status of hepatitis B control, especially through immunization and other information and advocacy packages.

3.6.2 ITAG recommendations

ITAG recommendations for all countries

While recommendations made at the 2016 meeting remain valid, the ITAG added the following:

(1) Countries without HepB-BD should assess whether introduction is a relevant strategy, taking into account their epidemiological situation with regards to HBV infection.

(2) Countries providing HepB-BD should conduct assessments to identify causes for low coverage, particularly for health facility births.

(3) WHO’s Regional Office for SEA should support countries in measuring the impact of control measures taken to date, that is to say conducting nationally representative hepatitis B serosurveys among children to document progress towards the 2020 target.

(4) The Regional Office for SEA should consider a verification framework with potential pilot application in selected countries with evidence of having achieved the 2020 control target.
3.7 **Introduction of new vaccine and related technologies is accelerated (Goal 7)**

The SEAR-VAP 2016-2020 identifies the accelerated introduction of new vaccines and related technologies as one of its eight goals.

Since the launch of Gavi in 2000 there has been a tremendous boost in the development of and access to new vaccines and related technologies, even for low income countries. New and increasingly sophisticated vaccines have become available in the last decade for diseases that have not traditionally been targeted by NIPs. As a result, many developing countries have added two or more new vaccines to the national immunization schedule during the last decade, and have strengthened their NIPs in the process. Even countries such as Maldives and Thailand, although not eligible for Gavi support, have started to introduce and increase the population’s access to these vaccines.

Priority vaccines for consideration based on the disease burden of countries are pneumococcal conjugate vaccine (PCV), human papilloma virus (HPV) vaccine, JE vaccine and rotavirus vaccine (RV). In addition cholera, mumps, seasonal influenza and typhoid vaccines could be considered for specific geographical areas and age groups.

### 3.7.1 ITAG Conclusions

The ITAG reviewed the progress made in the Region towards the introduction of PCV, HPV vaccine and RV.

The ITAG noted that Bangladesh, Nepal, Myanmar and four states of India have introduced PCV containing 10 pneumococcal serotypes-(PCV-10), and that there are plans to introduce PCV 10 in one province of Indonesia as a pilot project. It also noted that post introduction evaluations conducted in Bangladesh and subsequent follow up of recommendations confirmed that coverage with the third dose of PCV (PCV3) has reached the coverage level of DTP3, that PCV is acceptable to communities and that there are no concerns related to injection safety. The ITAG observed that PCV3 coverage in Myanmar and Nepal has not reached the level of coverage which has been achieved with the third dose of Penta (Penta3), both nationally and sub-nationally.

The ITAG was pleased to note that there is keen interest among many countries for HPV vaccine introduction, with Bhutan having introduced the HPV vaccine in
2008 while Sri Lanka is expected to introduce the vaccine in 2017. The ITAG also noted that Nepal and Bangladesh have successfully completed demonstration projects with Gavi support in one district each, and are now planning to submit applications to Gavi for nationwide introduction. Thailand has introduced HPV vaccine in one province and Maldives is also considering introducing HPV vaccine. The ITAG noted that post introduction evaluations following the demonstration projects in Bangladesh and Nepal have shown that HPV vaccination is acceptable both to girls in the target age group and to their communities.

The ITAG noted that India has introduced RV in six states with plans to introduce it in two more states, while Thailand conducted a pilot project of RV introduction in a selected province and plans for nationwide introduction from 2018 to 2020. Indonesia plans to introduce RV in one province with Gavi support as a pilot project. Gavi has approved Bangladesh’s application for RV introduction in 2018 while Nepal has submitted an application to Gavi and Myanmar plans to submit an application to support RV introduction.

However, the ITAG noticed that some countries do not have adequate disease burden information on which evidence-based decisions regarding the introduction of new vaccines can be made. In contrast, in some other countries in which there are competing demands for public health funds, despite demonstrated disease burden, policy makers request data on the economic benefits and cost effectiveness of a new vaccine before deciding to introduce it. Several countries in the SEA Region have delayed or declined the introduction of new vaccines because of concerns regarding the long-term sustainability of funding from national budgets after Gavi funding stops.

The ITAG noted that post introduction evaluations of new vaccine introductions brings important recommendations for the vaccine introduction strategy as well as overall strengthening of immunization systems. These evaluations can be linked to EPI and surveillance evaluations and joint appraisals whenever feasible to optimize the use of resources.

### 3.7.2 ITAG recommendations

**ITAG recommendations for all countries**

(1) Surveillance of diseases preventable by new vaccines should be strengthened and epidemiological studies to generate disease burden information or assess impact of vaccines should be conducted.
(2) In countries where disease-burden data are not available, data from similar settings within the Region should be used to make policy decisions on introduction of new vaccines.

(3) Countries should analyse introduction costs and economic benefits for new vaccines using nationally available data. Where needed, partners should facilitate analysis by mobilizing technical experts to support the work.

(4) Countries should conduct a thorough preparedness assessment before introducing new vaccine. Plans for doing this should be part of comprehensive multiyear plans (cMYPs) and Gavi health system strengthening (HSS) proposals.

(5) Countries are encouraged to conduct post introduction evaluations from six to 12 months after introduction of a new vaccine.

### 3.8 Access to high quality vaccines is ensured (Goal 8)

Recognizing that access to affordable vaccines of assured quality is central to the performance of immunization programmes, the SEAR-VAP 2016-2020 has identified ensuring access to high quality vaccine as one of its eight goals.

Vaccine development and production capacity in the Region is growing and playing an increasingly positive role, both at Regional and global levels. Three of the 11 countries of the SEA Region are WHO prequalified (PQ) vaccine-producing nations, representing a significant supply to the global market. Bangladesh has established significant vaccine manufacturing capacity, and is currently positioned to manufacture cholera vaccine for the United Nations (UN), which could help address a global shortage. However, the NRA in Bangladesh needs to be assessed for its functionality before the cholera vaccine produced in the country can be prequalified for use by UN. At present, only Indonesia, India and Thailand have national regulatory authorities (NRAs) assessed as functional by WHO.

The key strategy to ensure access to high quality vaccines is to enhance regional cooperation through the expansion of centres of excellence (WHO-GLO) to provide training and technical support to countries in the Region in the areas of vaccine regulatory and immunization supply chain management. In April 2017 the Regional Office for SEA supported the first South East Asia Regulatory Network meeting in New Delhi to promote regional cooperation in the areas of vaccine regulatory and immunization supply chain management.
There is a strong need in the Region to invest in research, development and manufacturing techniques to identify best ways to access appropriate technology and expertise, to manage intellectual property rights and to develop thermostable and suitable products as well as new bioprocessing and manufacturing technologies. Governments can promote enabling environments for NRAs and manufacturers by communicating regularly and working in partnership with researchers, biotech companies and universities to develop new vaccines and technologies.

3.8.1 ITAG Conclusions

The ITAG recognized that vaccine price is a major factor influencing decisions to adopt and sustain new vaccines and that there is a lack of transparency regarding vaccine prices; this lack of transparency affects countries in their decision making processes around vaccine purchases.

It noted that the WHO vaccine product, price and procurement (V3P) web platform has been created to help countries gain access to up-to-date vaccine product, price and procurement information. However, so far only two countries have uploaded data to this platform, although this may change as V3P is part of the Joint Reporting Form (JRF) in 2017.

The ITAG noticed that, in 2016-2017, shortages of auto-disable (AD) syringes for RI were reported by some countries.

The ITAG acknowledged that countries which have introduced fractional IPV or plan to introduce fractional IPV must ensure a sustainable supply of Intradermal (ID) syringes with 0.1 markings. ID syringes with 0.1 ml markings are not used in immunization and are produced in short supply because manufacturers may not recognize the demand for these.

The ITAG appreciated that countries in the Region have established a network of strong regulatory agencies with WHO collaboration and that this network provides training and technical assistance to NRAs with limited capacity.

The ITAG noted that NRAs using the new benchmarking tools have to enforce Good Distribution Practices (GDP) in both private and public sectors, including within their own NIP.

The ITAG acknowledged the progress made in the Region to establish surveillance systems for adverse event following immunization (AEFI), as well as the existence of
strong AEFI committees to enable the conduct of periodic causality assessment of severe AEFI cases to support the licensure of vaccines.

3.8.2 ITAG recommendations

ITAG recommendations for all countries

(1) UNICEF and WHO regional offices, in collaboration with countries, should establish an early warning system to identify risks of vaccines, toxins and anti-sera shortages and to find solutions to prevent a drop of immunization coverage.

(2) Countries should share information on vaccine price, product and procurement and recommend that SEA Region countries upload vaccine data to the V3P platform, in order that information on all SEA countries is available.

(3) Countries should ensure an adequate supply of AD syringes, including 0.1 ml ID syringes for fractional IPV use for immunization. Countries that use UNICEF’s Supply Division for procurement must communicate their requirements to UNICEF at least six months in advance of the time at which they require syringes in order to ensure delivery of the syringes on time.

(4) Countries should develop plans to upgrade cold chain infrastructure in order to establish Immunization Supply Chain Management resource centres within the country.

(5) Countries should enhance collaboration between the NIP and the NRA to ensure that vaccines and immunization programme specifics are addressed as GDPs are strengthened.

(6) Countries should use standardized tools for AEFI reporting, such as the internet based WHO electronic Vaccine Adverse Events Monitoring System (VAEMS) reporting forms. Countries should apply the WHO algorithm for causality assessment of AEFI. This will facilitate AEFI data sharing for licensure of vaccines, as well as allow comparison of AEFI rates and the identification of signs of AEFIs.

(7) WHO and UNICEF should jointly explore with the Ministry of Health and Family Welfare in India the feasibility of extending the scope of the National Cold Chain and Vaccine Management Resource Centre to serve the Region.
Annex 1

Opening address by Regional Director

Members of the South-East Asia Region Immunization Technical Advisory Group (ITAG), Chairpersons of the National Immunization Technical Advisory Groups, SAGE members representing the Region, colleagues from WHO headquarters, representatives from countries of the South-East Asia Region, representatives of UNICEF, US CDC, GAVI and other partner agencies, ladies and gentlemen,

At the outset I would like to congratulate the entire immunization fraternity of the South-East Asia Region. In the past three years you have achieved remarkable feats.

In March 2014 our Region was certified polio-free. This historic milestone was made possible by your dedicated efforts over the course of many years.

In April 2016 our Region made the switch from trivalent to bivalent OPV. Your diligence and efficiency made us the first region in the world to do so.

In May 2015 our Region became the second among all regions to be validated as having eliminated maternal and neonatal tetanus. This stunning achievement was enabled by your commitment to leaving no one behind.

And in April 2017, two countries – Bhutan and Maldives – were validated for eliminating endemic measles. Given your drive and success, I’m sure they will be the first of many to eliminate the life-threatening disease.

Distinguished participants,

These achievements are an immense source of pride. They are testimony to the contributions of each of you here, as well as the millions of health workers and volunteers that have supported immunization programmes.

They are also part of a wider success story.

As you know, vaccination is among the most efficient and cost-effective health interventions ever devised. It has enabled the eradication of small pox, and lowered the global incidence of polio by more than 99%. We are now close to global
eradication. It has decreased neonatal tetanus by 94%, and achieved dramatic reductions in illness, disability and death from diseases that have long plagued humanity, including diphtheria, pertussis, hepatitis B and rotavirus. Indeed, it has transformed the health and wellbeing of whole communities in our Region and across the world, making healthier, happier and more prosperous lives possible.

Nevertheless, the risk from vaccine-preventable diseases is ever-present. The re-emergence of diseases once thought vanquished, particularly in high-income countries, demonstrates the need for eternal vigilance and action. Across our Region the health and wellbeing of millions of children depends on us not only sustaining, but also intensifying immunization efforts. Complacency is not an option.

We must renew our focus on closing immunization gaps. We must capitalize on lessons learnt from major public health victories, especially the polio eradication programme. We must reach the unreached and underserved, including children living in remote areas and in deprived urban settings. And we must ensure equitable access to the benefits immunization brings.

Ladies and gentlemen,

Today we are gathered to make this happen. We are here to affirm the promise of Sustainable Development Goal 3 – to “Ensure healthy lives and promote well-being for all at all ages”. We are also striving to attain a “South East Asia Region free of vaccine-preventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life course,” as per SDG targets 3.2 and 3.b.

In pursuing these targets and objectives, I want to emphasize five action points that are critically important, and which will strengthen immunization systems across the Region.

The first is maximizing the reach of immunization programmes. As a matter of routine, traditional vaccines, as well as new and under-utilized vaccines that are safe, efficient and affordable, should be deployed as widely as possible. No child should be left behind, and no opportunity missed to confer immunization’s life-saving benefits. Vaccination is a right, and one that carries positive obligations that must be fulfilled.

Second is enhancing capacity to manage immunization programmes. Ensuring that technical advisory committees in all countries are functional is a key imperative. So too is ensuring appropriate policy frameworks are in place and facilitating
operations. Where inadequate capacity exists it must be rapidly attained, allowing programme managers to act with poise and efficiency, and to do so in synergy with other preventive health interventions.

Third is mobilizing individuals and communities at the grassroots. By creating positive immunization experiences and highlighting the benefits vaccines bring, grassroots demand can be stimulated. The resurgence of measles in other parts of the world indicates the need to increase awareness and overcome vaccine hesitancy in a more coherent manner. Effective communication strategies are vital to this effort, and must be seen as integral to success.

Fourth is maintaining and strengthening partnerships. Partnerships between service providers and the community, partnerships between different technical programmes, and partnerships between national governments and the global community at large are crucial to continued progress. WHO is, as always, committed to leveraging our collective strengths to advance public health Region-wide.

And fifth is monitoring our progress. Across the Region we must expand and strengthen disease surveillance so it can better inform programmatic decision-making. At the same time, immunization information systems should be linked to national health information databases, while a periodic joint program of review should be undertaken to guide future actions.

Ladies and gentlemen,

As you know, the South-East Asia Region is determined to eliminate measles and control rubella by 2020. Achieving this goal is one of eight regional priorities. Though measles elimination is possible, it requires high-level resolve and the full commitment of EPI programmes in each of our countries. It also demands unwavering support from national and international partners and immunization technical advisory groups.

As I said earlier, your recent achievements provide a solid foundation for the pursuit of measles elimination and rubella control. In each of the Region’s countries we have well-performing immunization and surveillance systems, as well as staff that are drilled in a range of best practices. For the most part, whether we succeed or not hinges on the commitment, fortitude and resolve that we can mobilize.

As I know you appreciate, every child in our Region deserves the best we have to offer. Indeed, we all agree that every family, no matter where they live, has a right to immunization and health services. I am also sure we agree that the persistence
of measles is a tragic and unnecessary reality, and that so too is the unacceptable incidence of rubella across our Region. Indeed, there can be no question of our commitment; there can be no doubt of our resolve.

Distinguished participants, ladies and gentlemen,

I am certain this group will deliberate with clarity and passion on the many important and pressing issues on this meeting’s agenda. I am confident the rich experience provided by national ITAG members, along with our very capable national EPI colleagues and country office staff from WHO and UNICEF, will facilitate a fruitful exchange of experience, views and recommendations.

Through our collective effort we have the power to fortify and expand routine immunization across the Region. We have the power to prevent, control and eliminate vaccine-preventable diseases, including measles.

I wish you a productive meeting and a very pleasant stay in New Delhi.

Thank you
Annex 2

Agenda

(1) Inauguration and opening address by WHO’s Regional Director for South-East Asia Region

(2) Progress and challenges in implementation of South-East Asia Regional and Global Vaccine Action Plans

(3) Measles elimination and rubella/CRS control
   - Global and SEA Regional update on implementation of measles and rubella activities
   - Closing immunity gap for measles and rubella
     (i) Current immunity profile in SEAR
     (ii) Country presentation by Indonesia on preparedness for Measles Rubella vaccination campaign
   - Surveillance for measles and rubella
     (i) Regional performance on surveillance for measles and rubella
     (ii) Country presentation by India on expansion of surveillance for measles and rubella
     (iii) Performance of measles and rubella laboratory network in SEAR
     (iv) CRS surveillance review in Bangladesh
   - Linkages for measles elimination and rubella/CRS control
     (i) Country presentation by Thailand on response to measles outbreak in Southern Thailand – overcoming vaccine hesitancy/refusal
     (ii) Country presentation by Myanmar on outbreak response in Nagaland & use of sub-national risk assessment for measles and rubella for programmatic actions
     (iii) Research for measles and rubella in SEAR
Regional Verification Commission (RVC)- update on the recent process for review of country progress towards measles elimination

(4) Strengthening routine immunization systems and services

- Maximizing Reach
  - Progress and challenges in routine immunization in South-East Asia
  - Approaches and tools for implementing global routine immunization strategies and practices (GRISP)
  - Addressing immunization inequities in urban areas
  - Country presentation by Timor-Leste on progress towards measles elimination and new vaccine introductions

- Managing the immunization program
  - Update on immunization system strengthening in South-East Asia Region
  - EVM improvement plan - WHO-UNICEF joint collaboration on Immunization Supply-Chain Management (ISCM)
  - Financial sustainability and health system strengthening

- Mobilizing communities
  - Vaccine hesitancy
  - Country presentation by India on lessons learnt from communication challenges identified during MR SIAs

- Monitoring progress
  - Overview of data quality assessment
  - Country presentation by Bangladesh on assuring data quality in RI and VPD surveillance
  - Country presentation by Indonesia on experience of national immunization technical advisory group (NITAG)
  - Country presentation by Myanmar on implementation of recommendations of the EPI/VPD surveillance review

(5) Group work on implementing routine immunization strategies with a focus on achieving measles elimination & rubella control
(6) Accelerating control of Japanese Encephalitis (JE)
   - Regional update on control of JE
   - Country presentation by Nepal on vaccination & surveillance for JE

(7) Introduction of new vaccines and related technologies
   - Regional and global update on new vaccines introduction
   - Analyzing cost effectiveness of new vaccine introduction
   - Country presentation by Sri Lanka on national introduction of HPV vaccine
   - Country presentation by DPR Korea on PIE for pentavalent vaccine and IPV
   - Opportunities and challenges for new vaccine introductions

(8) Accelerating control of Hepatitis B
   - Global and Regional overview on Hepatitis B control
   - Country presentation by Bhutan on Hepatitis B seroprevalence survey
   - Country presentation by India on challenges and opportunities in achieving high Hep B birth dose coverage

(9) Maintaining Polio-free status and implementing endgame strategies
   - Global and Regional update on implementation of polio eradication and endgame strategic plan implementation
   - Expanding environmental surveillance in SEAR
   - Country presentation by Sri Lanka on experience of introducing fractional IPV
   - Regional update on polio virus laboratory containment
   - Progress on transition planning in SEAR
   - Country presentation by Nepal on transition planning
   - Post-certification strategy

(10) Recommendations of the ITAG

(11) Closing session
Annex 3

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Eighth Meeting of the WHO South-East Asia Region Immunization Technical Advisory Group (SEAR-ITAG)
WHO-SEARO, New Delhi, India, 13-16 June 2017
The eighth meeting of the World Health Organization's South-East Asia Regional Immunization Technical Advisory Group (SEAR-ITAG) was held from 13 to 16 June 2017 in New Delhi, India.

SEAR-ITAG is a technical group comprising of experts from disciplines such as programme management, communicable diseases/vaccine preventable diseases control, virology, epidemiology and immunization. SEAR-ITAG provides guidance on setting of regional priorities for immunization and technical support for strengthening routine immunization services to member states. It meets annually with the participation of national EPI managers and surveillance focal points and partners to review progress on increasing immunization coverage, surveillance performance, programme issues, and matters related to vaccine quality assurance, and provides guidance on ways to improve and sustain overall high quality performance in member states.

This publication provides an overview of conclusions and recommendations of research group, SEAR-ITAG, annual meeting during 2017.